

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A computer-implemented method of improving performance in a Java computer application program executable by a Java virtual machine (JVM), comprising the steps of:
obtaining information associated with garbage collection; and
deducing changes in performance that will result from modifying the Java computer application program;

wherein a cost of garbage collection to program performance of a modified version of the Java computer application program is estimated by the computer-implemented method using a duration of an average garbage collection event and a frequency of occurrence of particular garbage collection events;

wherein the duration depends on an amount of garbage that must be cleaned up; an algorithm used to do collecting or copying; a heap compaction; a cost of reconciling object references that are moved; and a number of Java-based finalizers that must be executed;

wherein the frequency depends on a rate of object creation; heap fragmentation; size of the heap; and a garbage collection policy;

wherein the Java computer application program is changed by reducing memory from a footprint of the Java computer application program, wherein given an amount of memory to be reduced from the footprint (m), a total duration for a run (d), and how much of the run is spent in garbage collection (g), a number of additional transactions that can be computed during the run is determined according to:

$y = \text{function}(m, t, g, d, f)$, where

t is current computed throughput of the Java computer application program in transactions/second,

f is average memory footprint of the Java computer application program during duration d , and

y is the number of additional transactions gained as a result of reducing the memory footprint of the Java computer application program to $(f - m)$ during the total duration d .

2-7. (Cancelled)

8. (Previously Presented) The method of claim 1, wherein the information associated with garbage collection is obtained from a verbosegc.

9-23. (Cancelled)